CLAIMS

1. A method of producing a single crystal according to Czochralski method comprising the steps of, charging polycrystalline material into a crucible, heating and melting the polycrystalline material by a heater disposed so as to surround the crucible, immersing a seed crystal into the material melt and then pulling the seed crystal to grow a single crystal, wherein in the case of growing a single crystal of which resistivity is controlled by doping with boron, the highest temperature of the crucible is controlled to be 1600°C or less to grow the single crystal.

2. The method of producing a single crystal according to Claim 1, wherein the single crystal doped with boron is grown so that the resistivity of the single crystal to be grown is 0.1 Ω cm or less.

3. The method of producing a single crystal according to Claim 1 or Claim 2, wherein the single crystal doped with boron is grown so that the resistivity of the single crystal to be grown is 0.001 Ω cm or more.

4. The method of producing a single crystal according to any one of Claims 1 - 3, wherein the single crystal doped with nitrogen is grown so that concentration of nitrogen in the single crystal to be grown is from 1 x 10^{10} /cm^3 to 5 x 10^{15} /cm^3.

5. The method of producing a single crystal according to any one of Claims 1 - 4, wherein a silicon single crystal is grown as the single crystal.

6. The method of producing a single crystal according to any one of Claims 1 - 5, wherein in the case of growing the single crystal, a magnetic field of at least 300 gauss or more is applied to the material melt to grow the single crystal.

7. The method of producing a single crystal according to any one of Claims 1 - 6, wherein a single crystal with a diameter of 200mm or more is grown as the single crystal.